Maryland Health, Communities
and Environment

Who is most at risk & Where are the most vulnerable communities?
Summary of results from DHMH-UMD Project.

March 16, 2017
Mitigation Working Group
Maryland Climate Change Commission
10am – 12pm
BRACE FRAMEWORK

01. Forecasting Climate Impacts and Assessing Vulnerabilities
02. Projecting the Disease Burden
03. Assessing Public Health Interventions
04. Developing and Implementing an Adaptation Plan
05. Evaluating Impact and Improving Quality of Activities

BRACE: Building Resilience Against Climate Effects
Extreme Heat Events and Risk of Hospitalization for Asthma

% Increase in Risk of Hospitalization for Asthma

Overall  Non-Hisp White  Non-Hispanic Blacks

Soneja et al. Env. Health 2016
Increased Risk of Salmonella Associated with Extreme Precipitation

<table>
<thead>
<tr>
<th>Geographic Areas</th>
<th>% Increase in Salmonella Risk</th>
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</thead>
<tbody>
<tr>
<td>Overall</td>
<td>5.6</td>
</tr>
<tr>
<td>Non-Coastal Areas</td>
<td>3.6</td>
</tr>
<tr>
<td>Coastal Areas</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Jiang et al. Environ Int 2015
Extreme Heat Events and Risk of Hospitalization for Heart Attack

Fisher et al. JESEE 2016
Asthma Hospitalization Rate by County

Age-Adjusted ED Rate per 10,000
- 25.6 - 28.4
- 28.5 - 50.2
- 50.3 - 74.9
- 75.0 - 133.5
- 133.6 - 216.0
Percent Minority Population by Census Tract

% Minorities

- 0.9 - 14.1
- 14.1 - 29.9
- 29.9 - 54.9
- 54.5 - 86.6
- 86.6 - 100.0
Health Professional Shortage Areas

[Map showing geographic distribution of health professional shortage areas in Maryland, with counties shaded in different colors to indicate severity levels.]

- Normal
- HPSA Census Tracts or Counties

[Legend with distance scale 100-400 km marked on the map.]
Summertime Asthma Hospitalization Rate by County

Maryland Climate and Health Profile, 2016
**Vulnerable populations:**
Identified in the 2016 Climate and Health Profile Report

<table>
<thead>
<tr>
<th><strong>Ethnicity</strong></th>
<th><strong>Geographical</strong></th>
<th><strong>Other</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic blacks</td>
<td>Coastal communities</td>
<td>Health Care Shortage Areas</td>
</tr>
<tr>
<td>Non-Hispanic whites</td>
<td>Baltimore City</td>
<td>Poorly maintained roads</td>
</tr>
<tr>
<td></td>
<td>Baltimore City, PG, Washington</td>
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Current work

PARTNERS:

• Maryland Environmental Health Network
• Minority Office of Technical Assistance (Office of Minority Health)
• ARWG
• ECO
• Eastern Shore Climate Adaptation Partnership
• PG and AA County School system
• Always looking for more collaborators

ACTIVITIES & EVENTS

• Building Resilient Communities in Maryland: A Stakeholder Forum (Dec. 9, 2016)
• Climate Change and Environmental Health in Maryland shared google calendar
• Healthy Anne Arundel health fairs
• Conferences and workshops
• Planning listening sessions across MD
• Possible 2 day regional meeting this fall.
Contact information

MD DHMH Climate and Health Webpage

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